EXPEDITION TRAVEL - ECOTRICITY-BRITAIN'S GREENEST ENERGY COMPANY

Introduction

One of the modules I took during my master's program was Renewable Energy. During my course, I learnt of the importance of the energy transition in respect to moving towards green energy. No longer can we rely on fossil fuels, as a source of energy as it poses major danger for the environment. Through the course I learnt that the energy transition is a pathway toward transformation of the global energy sector from fossil based to zero-carbon by the second half of this century (Renewable Energy Lecture Slides). The main drivers of the energy transition are environmental and health concerns, growing demand for energy in developing and emerging economies, increased focus on security of supply, the importance cost-competitiveness of renewable technologies, dedicated policy initiatives, better access to financing (Renewable Energy lecture slides). I also learnt that there are different renewable energies, including solar, wind, hydro, tidal, geothermal, biomass, nuclear power. The course also focused on key commercial agreements that are concluded in the development and supply of renewable energy. It is primarily private organisations that are involved in renewable energy projects, with the support of government from a legislative and policy framework perspective.

As someone who had no prior experience in renewable energy, I was curious to learn more and wanted to explore it in a more practical way. I started looking into opportunities in the renewable energy sector to gain some practical experience. I reached out to Ecotricity who arranged for me to visit their offices to learn more about the work done by a company in the renewable energy sector, and how they drive positive change for the environment.

On 17 July 2024, I headed to the headquarters of Ecotricity situated in Stroud, Gloucestershire, where the legal team and development team who gave me great insight into the business of Ecotricity. I spent the day learning about the business's end to end process and the importance of its mission in supporting Britain's green transition by supplying green electricity and green gas across the United Kingdom, amongst other things.

As a way of background, Ecotricity was founded by Dale Vince in 1995 with the objective of replacing fossil fuel with green electricity and green gas across the United Kingdom. Ecotricity supplies green electricity primarily from two sources of renewable energy, being solar and wind power.

What I hope to gain from the day at Ecotricity?

Before visiting Ecotricity I had set some key questions that I needed clarity on. Firstly, I wanted to understand how the changes to the planning rules in the UK will lead to more onshore wind farms? Previously (since 2014) there was a ban on onshore wind development. Secondly, how reliant are solar panels and wind farms, on rare earth metals, such as neodymium and is it something Ecotricity is worried may run out or become very expensive? Thirdly, can the UK get a position where all its power is from renewables and how is the intermittency dealt with (i.e. the sun not shining or wind not blowing)? Lastly, I wanted to understand the Ecotricity business model and how they have successfully contributed to the UK energy transition.

What did I learn during my visit?

During the time spent with the legal team I got to learn about the various initiatives that the Ecotricity is involved in in its effort to increase access to green energy. We discussed the different agreements that the legal team generally works on in respect to the renewable energy projects. Ecotricity's primary renewable energy source is solar and wind power. The legal team is involved in the different phases of the solar and wind power projects.

Generally, these projects fall into different phases, beginning with a feasibility study, followed by planning and development phase, and lastly the maintenance phase. Various agreements are prepared and vetted by the legal team. This includes leases/option to lease in respect of the land to be used for development; planning permissions or permits, grid connection agreements. The legal team is also involved in the drafting and vetting of an EPC (Engineering, Procurement, and Construction) Contract, Finance Contracts, Operation and Maintenance Contract and Remediation Contracts etc.

The development team are responsible for site identification, by using relevant technological tools to identify primary sites that can be used for development. Once a site is identified, a feasibility study is conducted on the site. At every stage of development, the relevant legislative framework is factored (e.g. wind farms must be built at a certain distance away from residential areas). Other areas that the development team are responsible for is the grid applications to ensure there is access to the grid.

I also gained insight into my questions following my visit with Ecotricity. On the question of the ban on onshore wind turbine development, the results of the UK elections, removed the ban in respect to onshore wind power, which means that there would be more opportunity to build more wind turbines on land, increasing the potential of wind energy. On the matter of intermittency, the storage capacity for energy produced helps in dealing with any possible shortages.

Concluding remarks

Thank you to the Ecotricity team for a very informative visit. I learnt a lot during my stay and now have some understanding of the renewable energy sector, especially in respect to wind and solar power projects.

Thank you to QMUL for the expedition fund which contributed towards my travelling expenses and made it possible for me to have this meaningful experience.


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